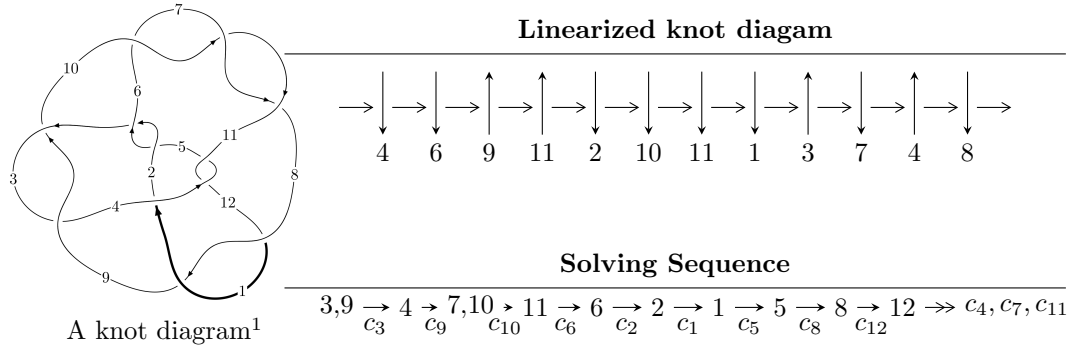


12n₀₇₇₈ (K12n₀₇₇₈)



A knot diagram¹

$$3,9 \xrightarrow{c_3} 4 \xrightarrow{c_9} 7,10 \xrightarrow{c_{10}} 11 \xrightarrow{c_6} 6 \xrightarrow{c_2} 2 \xrightarrow{c_1} 1 \xrightarrow{c_5} 5 \xrightarrow{c_8} 8 \xrightarrow{c_{12}} 12 \rightsquigarrow c_4, c_7, c_{11}$$

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 2.19719 \times 10^{90} u^{58} + 3.18845 \times 10^{90} u^{57} + \dots + 8.27618 \times 10^{90} b + 5.36600 \times 10^{91}, \\ 1.26061 \times 10^{91} u^{58} + 1.72237 \times 10^{91} u^{57} + \dots + 2.48285 \times 10^{91} a + 4.55960 \times 10^{92}, u^{59} + u^{58} + \dots - 18u - 9 \rangle$$

$$I_2^u = \langle u^{16} - u^{15} + \dots + 5b - 9, 7u^{16} + 3u^{15} + \dots + 5a - 28, u^{17} + 10u^{15} + \dots - 5u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 76 representations.

¹The image of knot diagram is generated by the software “**Draw programme**” developed by Andrew Bartholomew(<http://www.layer8.co.uk/maths/draw/index.htm#Running-draw>), where we modified some parts for our purpose(<https://github.com/CATsTAILs/LinksPainter>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I.

$$I_1^u = \langle 2.20 \times 10^{90} u^{58} + 3.19 \times 10^{90} u^{57} + \dots + 8.28 \times 10^{90} b + 5.37 \times 10^{91}, 1.26 \times 10^{91} u^{58} + 1.72 \times 10^{91} u^{57} + \dots + 2.48 \times 10^{91} a + 4.56 \times 10^{92}, u^{59} + u^{58} + \dots - 18u - 9 \rangle$$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.507725u^{58} - 0.693705u^{57} + \dots - 47.3340u - 18.3644 \\ -0.265483u^{58} - 0.385257u^{57} + \dots - 20.1693u - 6.48366 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.18361u^{58} - 1.61569u^{57} + \dots - 147.188u - 26.2949 \\ 0.331778u^{58} + 0.515855u^{57} + \dots + 42.4239u + 9.96083 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.503583u^{58} - 0.697011u^{57} + \dots - 43.9621u - 17.7685 \\ -0.261341u^{58} - 0.388563u^{57} + \dots - 16.7974u - 5.88781 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1.73974u^{58} + 2.35435u^{57} + \dots + 193.814u + 32.6618 \\ 0.0168231u^{58} + 0.0480879u^{57} + \dots - 16.3637u - 3.47890 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1.92664u^{58} + 2.62835u^{57} + \dots + 204.171u + 34.7144 \\ -0.0640961u^{58} - 0.0778894u^{57} + \dots - 19.6136u - 4.26282 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.23803u^{58} + 1.74157u^{57} + \dots + 163.964u + 31.2786 \\ -0.729025u^{58} - 0.985396u^{57} + \dots - 80.2851u - 18.3600 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.155964u^{58} + 0.116373u^{57} + \dots + 20.0247u - 5.23157 \\ -0.846484u^{58} - 1.22210u^{57} + \dots - 89.6127u - 19.8092 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.979045u^{58} + 1.35615u^{57} + \dots + 123.194u + 20.2228 \\ -0.337866u^{58} - 0.511247u^{57} + \dots - 39.5933u - 9.46607 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-10.7456u^{58} - 14.9438u^{57} + \dots - 1129.44u - 248.422$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{59} - 6u^{58} + \dots - 172u - 188$
c_2, c_5	$u^{59} + 2u^{58} + \dots + 16404u + 3277$
c_3, c_9	$u^{59} - u^{58} + \dots - 18u + 9$
c_4, c_{11}	$u^{59} - 3u^{58} + \dots - 326u - 59$
c_6, c_7, c_{10}	$u^{59} + u^{58} + \dots + 55u - 1$
c_8, c_{12}	$u^{59} - 2u^{58} + \dots + 4u + 19$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{59} + 2y^{58} + \dots + 493568y - 35344$
c_2, c_5	$y^{59} - 44y^{58} + \dots + 376032834y - 10738729$
c_3, c_9	$y^{59} + 61y^{58} + \dots + 5274y - 81$
c_4, c_{11}	$y^{59} - 35y^{58} + \dots + 302746y - 3481$
c_6, c_7, c_{10}	$y^{59} - 59y^{58} + \dots + 3505y - 1$
c_8, c_{12}	$y^{59} - 24y^{58} + \dots + 7920y - 361$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.946714 + 0.326161I$ $a = 1.56057 - 0.12495I$ $b = 0.311162 + 0.580467I$	$-1.56439 + 3.00160I$	0
$u = 0.946714 - 0.326161I$ $a = 1.56057 + 0.12495I$ $b = 0.311162 - 0.580467I$	$-1.56439 - 3.00160I$	0
$u = 0.274423 + 0.933293I$ $a = 1.093080 + 0.183487I$ $b = 0.284590 + 0.978686I$	$-1.31018 - 2.27927I$	0
$u = 0.274423 - 0.933293I$ $a = 1.093080 - 0.183487I$ $b = 0.284590 - 0.978686I$	$-1.31018 + 2.27927I$	0
$u = 0.432068 + 0.950149I$ $a = 0.769405 + 0.539694I$ $b = 0.959480 + 0.704692I$	$0.84211 - 1.52559I$	0
$u = 0.432068 - 0.950149I$ $a = 0.769405 - 0.539694I$ $b = 0.959480 - 0.704692I$	$0.84211 + 1.52559I$	0
$u = 0.352097 + 0.878149I$ $a = -0.045510 - 0.420512I$ $b = 0.39071 - 1.47323I$	$-3.75832 + 2.49847I$	$-12.64369 + 0.I$
$u = 0.352097 - 0.878149I$ $a = -0.045510 + 0.420512I$ $b = 0.39071 + 1.47323I$	$-3.75832 - 2.49847I$	$-12.64369 + 0.I$
$u = -1.13422$ $a = -1.26893$ $b = -0.0814501$	-6.98624	0
$u = 0.561179 + 1.012900I$ $a = -0.302808 - 0.673820I$ $b = 0.31273 - 1.54903I$	$-3.67169 + 2.45859I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.561179 - 1.012900I$ $a = -0.302808 + 0.673820I$ $b = 0.31273 + 1.54903I$	$-3.67169 - 2.45859I$	0
$u = -1.044970 + 0.554481I$ $a = 1.284180 - 0.118622I$ $b = 0.348427 - 0.902142I$	$-2.53248 - 9.55354I$	0
$u = -1.044970 - 0.554481I$ $a = 1.284180 + 0.118622I$ $b = 0.348427 + 0.902142I$	$-2.53248 + 9.55354I$	0
$u = 0.694897 + 0.309169I$ $a = -0.655382 - 0.922102I$ $b = -0.492656 + 0.163283I$	$2.70885 + 5.61589I$	$-3.30287 - 6.43944I$
$u = 0.694897 - 0.309169I$ $a = -0.655382 + 0.922102I$ $b = -0.492656 - 0.163283I$	$2.70885 - 5.61589I$	$-3.30287 + 6.43944I$
$u = -0.377570 + 1.203860I$ $a = 0.551178 - 0.618257I$ $b = 0.836117 - 0.754276I$	$0.14649 - 4.50904I$	0
$u = -0.377570 - 1.203860I$ $a = 0.551178 + 0.618257I$ $b = 0.836117 + 0.754276I$	$0.14649 + 4.50904I$	0
$u = -0.727540 + 0.051837I$ $a = -0.190027 + 0.786244I$ $b = -0.397472 - 0.225985I$	$3.62930 + 0.50765I$	$-0.833668 + 0.393936I$
$u = -0.727540 - 0.051837I$ $a = -0.190027 - 0.786244I$ $b = -0.397472 + 0.225985I$	$3.62930 - 0.50765I$	$-0.833668 - 0.393936I$
$u = -0.219875 + 1.257510I$ $a = 0.364413 + 0.342316I$ $b = -0.279945 + 0.897413I$	$-0.40003 - 2.91377I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.219875 - 1.257510I$ $a = 0.364413 - 0.342316I$ $b = -0.279945 - 0.897413I$	$-0.40003 + 2.91377I$	0
$u = -1.000700 + 0.859170I$ $a = -0.917675 + 0.566007I$ $b = -0.110854 + 1.175290I$	$-3.32365 + 2.74478I$	0
$u = -1.000700 - 0.859170I$ $a = -0.917675 - 0.566007I$ $b = -0.110854 - 1.175290I$	$-3.32365 - 2.74478I$	0
$u = -0.037604 + 1.359730I$ $a = 0.67112 - 2.28060I$ $b = 0.72572 - 3.32571I$	$-4.27309 + 0.18450I$	0
$u = -0.037604 - 1.359730I$ $a = 0.67112 + 2.28060I$ $b = 0.72572 + 3.32571I$	$-4.27309 - 0.18450I$	0
$u = -0.225882 + 0.585977I$ $a = 0.581173 - 0.021516I$ $b = 0.153517 + 0.402501I$	$-0.260694 - 1.053330I$	$-4.12893 + 6.41098I$
$u = -0.225882 - 0.585977I$ $a = 0.581173 + 0.021516I$ $b = 0.153517 - 0.402501I$	$-0.260694 + 1.053330I$	$-4.12893 - 6.41098I$
$u = 0.122554 + 1.388830I$ $a = -0.994864 - 0.157474I$ $b = -0.458238 - 0.081576I$	$-7.26872 + 1.86522I$	0
$u = 0.122554 - 1.388830I$ $a = -0.994864 + 0.157474I$ $b = -0.458238 + 0.081576I$	$-7.26872 - 1.86522I$	0
$u = -0.064719 + 1.399950I$ $a = 0.551474 - 0.867993I$ $b = -0.18042 - 1.60402I$	$-4.84282 - 1.75534I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.064719 - 1.399950I$ $a = 0.551474 + 0.867993I$ $b = -0.18042 + 1.60402I$	$-4.84282 + 1.75534I$	0
$u = 0.15765 + 1.41350I$ $a = -1.30737 + 1.31318I$ $b = -1.20152 + 2.27783I$	$-11.48850 + 1.95356I$	0
$u = 0.15765 - 1.41350I$ $a = -1.30737 - 1.31318I$ $b = -1.20152 - 2.27783I$	$-11.48850 - 1.95356I$	0
$u = -0.20549 + 1.40769I$ $a = 0.45179 + 1.89171I$ $b = 0.54915 + 3.15852I$	$-15.4308 - 2.6517I$	0
$u = -0.20549 - 1.40769I$ $a = 0.45179 - 1.89171I$ $b = 0.54915 - 3.15852I$	$-15.4308 + 2.6517I$	0
$u = 0.12784 + 1.44950I$ $a = 0.49772 + 2.72782I$ $b = 0.51248 + 3.68045I$	$-4.61048 + 6.42427I$	0
$u = 0.12784 - 1.44950I$ $a = 0.49772 - 2.72782I$ $b = 0.51248 - 3.68045I$	$-4.61048 - 6.42427I$	0
$u = 0.24147 + 1.45902I$ $a = 0.195740 - 0.333338I$ $b = -0.532485 - 0.754762I$	$-3.05183 + 8.97120I$	0
$u = 0.24147 - 1.45902I$ $a = 0.195740 + 0.333338I$ $b = -0.532485 + 0.754762I$	$-3.05183 - 8.97120I$	0
$u = -0.513897$ $a = 3.15603$ $b = -0.176822$	-10.6596	6.98370

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.35908 + 1.48621I$ $a = 0.31558 - 1.94989I$ $b = 0.33758 - 3.01668I$	$-7.41483 + 7.70510I$	0
$u = 0.35908 - 1.48621I$ $a = 0.31558 + 1.94989I$ $b = 0.33758 + 3.01668I$	$-7.41483 - 7.70510I$	0
$u = -0.44114 + 1.47669I$ $a = -0.464833 - 1.280610I$ $b = -0.53565 - 2.19843I$	$-11.91740 - 5.70509I$	0
$u = -0.44114 - 1.47669I$ $a = -0.464833 + 1.280610I$ $b = -0.53565 + 2.19843I$	$-11.91740 + 5.70509I$	0
$u = 0.389493 + 0.220844I$ $a = -2.44087 + 0.94073I$ $b = -0.754459 - 1.051460I$	$0.98362 + 4.60612I$	$-4.20164 - 5.47950I$
$u = 0.389493 - 0.220844I$ $a = -2.44087 - 0.94073I$ $b = -0.754459 + 1.051460I$	$0.98362 - 4.60612I$	$-4.20164 + 5.47950I$
$u = 0.421815$ $a = 1.90314$ $b = 0.0611523$	-1.31886	-6.37980
$u = 0.00552 + 1.58194I$ $a = -0.499227 - 0.232760I$ $b = -0.087958 - 0.208511I$	$-7.88129 - 1.40424I$	0
$u = 0.00552 - 1.58194I$ $a = -0.499227 + 0.232760I$ $b = -0.087958 + 0.208511I$	$-7.88129 + 1.40424I$	0
$u = 0.404606$ $a = 1.10231$ $b = 1.14381$	-2.55057	7.13820

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.12585 + 1.62496I$ $a = -0.95051 + 2.36181I$ $b = -0.86504 + 3.19856I$	$-12.17070 + 4.62001I$	0
$u = 0.12585 - 1.62496I$ $a = -0.95051 - 2.36181I$ $b = -0.86504 - 3.19856I$	$-12.17070 - 4.62001I$	0
$u = -0.37010 + 1.59094I$ $a = 0.35752 + 2.03746I$ $b = 0.31522 + 3.03288I$	$-9.4757 - 14.7159I$	0
$u = -0.37010 - 1.59094I$ $a = 0.35752 - 2.03746I$ $b = 0.31522 - 3.03288I$	$-9.4757 + 14.7159I$	0
$u = 0.365225$ $a = -2.32338$ $b = 1.24588$	-6.61235	-20.0250
$u = -0.17738 + 1.74654I$ $a = -0.46710 - 2.03444I$ $b = -0.40433 - 2.83686I$	$-12.58460 - 1.90611I$	0
$u = -0.17738 - 1.74654I$ $a = -0.46710 + 2.03444I$ $b = -0.40433 + 2.83686I$	$-12.58460 + 1.90611I$	0
$u = -0.169630 + 0.056480I$ $a = -7.62669 + 0.37534I$ $b = -0.832136 - 0.476957I$	$0.101047 - 0.878351I$	$-4.40864 + 3.72300I$
$u = -0.169630 - 0.056480I$ $a = -7.62669 - 0.37534I$ $b = -0.832136 + 0.476957I$	$0.101047 + 0.878351I$	$-4.40864 - 3.72300I$

II.

$$I_2^u = \langle u^{16} - u^{15} + \dots + 5b - 9, 7u^{16} + 3u^{15} + \dots + 5a - 28, u^{17} + 10u^{15} + \dots - 5u + 1 \rangle$$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{7}{5}u^{16} - \frac{3}{5}u^{15} + \dots - \frac{43}{5}u + \frac{28}{5} \\ -\frac{1}{5}u^{16} + \frac{1}{5}u^{15} + \dots - \frac{14}{5}u + \frac{2}{5} \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{3}{5}u^{16} - \frac{2}{5}u^{15} + \dots - \frac{12}{5}u + \frac{2}{5} \\ u^{10} + u^9 + 6u^8 + 5u^7 + 12u^6 + 9u^5 + 9u^4 + 7u^3 + 2u^2 + 2u - 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{6}{5}u^{16} - \frac{4}{5}u^{15} + \dots - \frac{29}{5}u + \frac{24}{5} \\ u^2 + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{7}{5}u^{16} + \frac{3}{5}u^{15} + \dots + \frac{43}{5}u - \frac{23}{5} \\ -u^4 - 2u^2 - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{9}{5}u^{16} + \frac{1}{5}u^{15} + \dots + \frac{51}{5}u - \frac{31}{5} \\ \frac{3}{5}u^{16} - \frac{3}{5}u^{15} + \dots + \frac{12}{5}u - \frac{7}{5} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{3}{5}u^{16} - \frac{3}{5}u^{15} + \dots + \frac{22}{5}u - \frac{2}{5} \\ -u^6 - 3u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{2}{5}u^{16} + \frac{2}{5}u^{15} + \dots - \frac{3}{5}u + \frac{8}{5} \\ -\frac{6}{5}u^{16} + \frac{1}{5}u^{15} + \dots - \frac{34}{5}u + \frac{14}{5} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{6}{5}u^{16} - \frac{4}{5}u^{15} + \dots - \frac{9}{5}u - \frac{1}{5} \\ -\frac{2}{5}u^{16} - \frac{3}{5}u^{15} + \dots + \frac{17}{5}u - \frac{7}{5} \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes $= -\frac{4}{5}u^{16} + \frac{9}{5}u^{15} - \frac{19}{5}u^{14} + \frac{89}{5}u^{13} + \frac{17}{5}u^{12} + \frac{344}{5}u^{11} + \frac{259}{5}u^{10} + \frac{653}{5}u^9 + \frac{586}{5}u^8 + \frac{608}{5}u^7 + \frac{539}{5}u^6 + \frac{196}{5}u^5 + \frac{152}{5}u^4 - \frac{76}{5}u^3 - \frac{79}{5}u^2 - \frac{66}{5}u - \frac{84}{5}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{17} - u^{16} + \dots - 8u - 16$
c_2	$u^{17} + 3u^{16} + \dots + u - 1$
c_3	$u^{17} + 10u^{15} + \dots - 5u + 1$
c_4	$u^{17} - 2u^{15} + \dots + u - 1$
c_5	$u^{17} - 3u^{16} + \dots + u + 1$
c_6, c_7	$u^{17} - 10u^{15} + \dots - 2u + 3$
c_8	$u^{17} - u^{16} + \dots + u - 1$
c_9	$u^{17} + 10u^{15} + \dots - 5u - 1$
c_{10}	$u^{17} - 10u^{15} + \dots - 2u - 3$
c_{11}	$u^{17} - 2u^{15} + \dots + u + 1$
c_{12}	$u^{17} + u^{16} + \dots + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{17} - 3y^{16} + \dots + 160y - 256$
c_2, c_5	$y^{17} - 13y^{16} + \dots - 5y - 1$
c_3, c_9	$y^{17} + 20y^{16} + \dots + 15y - 1$
c_4, c_{11}	$y^{17} - 4y^{16} + \dots + 31y - 1$
c_6, c_7, c_{10}	$y^{17} - 20y^{16} + \dots + 106y - 9$
c_8, c_{12}	$y^{17} - 13y^{16} + \dots + 17y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.370270 + 0.882724I$ $a = 1.126790 + 0.849720I$ $b = 0.40061 + 1.62836I$	$-0.37700 - 2.96750I$	$-6.68021 + 5.04813I$
$u = 0.370270 - 0.882724I$ $a = 1.126790 - 0.849720I$ $b = 0.40061 - 1.62836I$	$-0.37700 + 2.96750I$	$-6.68021 - 5.04813I$
$u = 0.283380 + 1.034670I$ $a = -0.474819 + 0.656137I$ $b = -0.579943 - 0.171953I$	$-0.92109 + 5.46786I$	$-10.23763 - 6.06003I$
$u = 0.283380 - 1.034670I$ $a = -0.474819 - 0.656137I$ $b = -0.579943 + 0.171953I$	$-0.92109 - 5.46786I$	$-10.23763 + 6.06003I$
$u = -0.294785 + 1.165370I$ $a = 0.149035 - 1.322070I$ $b = -0.44174 - 2.16688I$	$-2.15159 - 2.40927I$	$-6.43861 + 2.42877I$
$u = -0.294785 - 1.165370I$ $a = 0.149035 + 1.322070I$ $b = -0.44174 + 2.16688I$	$-2.15159 + 2.40927I$	$-6.43861 - 2.42877I$
$u = -0.310109 + 0.708925I$ $a = -0.022884 - 1.244910I$ $b = -0.0010927 + 0.1277530I$	$-0.506795 + 0.007742I$	$-9.18842 + 1.72914I$
$u = -0.310109 - 0.708925I$ $a = -0.022884 + 1.244910I$ $b = -0.0010927 - 0.1277530I$	$-0.506795 - 0.007742I$	$-9.18842 - 1.72914I$
$u = -0.755533$ $a = -1.11126$ $b = 0.596176$	-6.01295	-4.57530
$u = 0.18150 + 1.49267I$ $a = -0.58896 + 1.91094I$ $b = -0.59908 + 3.05192I$	$-16.2398 + 2.2995I$	$-16.2678 + 0.0594I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.18150 - 1.49267I$ $a = -0.58896 - 1.91094I$ $b = -0.59908 - 3.05192I$	$-16.2398 - 2.2995I$	$-16.2678 - 0.0594I$
$u = 0.02507 + 1.52816I$ $a = -0.859007 - 0.246531I$ $b = -0.489948 - 0.467465I$	$-8.73985 + 0.88822I$	$-14.9978 - 0.1467I$
$u = 0.02507 - 1.52816I$ $a = -0.859007 + 0.246531I$ $b = -0.489948 + 0.467465I$	$-8.73985 - 0.88822I$	$-14.9978 + 0.1467I$
$u = 0.421302$ $a = -3.52887$ $b = 0.468060$	-10.9243	-23.7490
$u = -0.21106 + 1.61530I$ $a = -0.94194 - 1.94202I$ $b = -0.90243 - 2.76465I$	$-12.16690 - 3.74722I$	$-13.50510 + 0.26507I$
$u = -0.21106 - 1.61530I$ $a = -0.94194 + 1.94202I$ $b = -0.90243 + 2.76465I$	$-12.16690 + 3.74722I$	$-13.50510 - 0.26507I$
$u = 0.245686$ $a = 2.86368$ $b = 1.16302$	-2.84280	-21.0440

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{17} - u^{16} + \dots - 8u - 16)(u^{59} - 6u^{58} + \dots - 172u - 188)$
c_2	$(u^{17} + 3u^{16} + \dots + u - 1)(u^{59} + 2u^{58} + \dots + 16404u + 3277)$
c_3	$(u^{17} + 10u^{15} + \dots - 5u + 1)(u^{59} - u^{58} + \dots - 18u + 9)$
c_4	$(u^{17} - 2u^{15} + \dots + u - 1)(u^{59} - 3u^{58} + \dots - 326u - 59)$
c_5	$(u^{17} - 3u^{16} + \dots + u + 1)(u^{59} + 2u^{58} + \dots + 16404u + 3277)$
c_6, c_7	$(u^{17} - 10u^{15} + \dots - 2u + 3)(u^{59} + u^{58} + \dots + 55u - 1)$
c_8	$(u^{17} - u^{16} + \dots + u - 1)(u^{59} - 2u^{58} + \dots + 4u + 19)$
c_9	$(u^{17} + 10u^{15} + \dots - 5u - 1)(u^{59} - u^{58} + \dots - 18u + 9)$
c_{10}	$(u^{17} - 10u^{15} + \dots - 2u - 3)(u^{59} + u^{58} + \dots + 55u - 1)$
c_{11}	$(u^{17} - 2u^{15} + \dots + u + 1)(u^{59} - 3u^{58} + \dots - 326u - 59)$
c_{12}	$(u^{17} + u^{16} + \dots + u + 1)(u^{59} - 2u^{58} + \dots + 4u + 19)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{17} - 3y^{16} + \dots + 160y - 256)(y^{59} + 2y^{58} + \dots + 493568y - 35344)$
c_2, c_5	$(y^{17} - 13y^{16} + \dots - 5y - 1)$ $\cdot (y^{59} - 44y^{58} + \dots + 376032834y - 10738729)$
c_3, c_9	$(y^{17} + 20y^{16} + \dots + 15y - 1)(y^{59} + 61y^{58} + \dots + 5274y - 81)$
c_4, c_{11}	$(y^{17} - 4y^{16} + \dots + 31y - 1)(y^{59} - 35y^{58} + \dots + 302746y - 3481)$
c_6, c_7, c_{10}	$(y^{17} - 20y^{16} + \dots + 106y - 9)(y^{59} - 59y^{58} + \dots + 3505y - 1)$
c_8, c_{12}	$(y^{17} - 13y^{16} + \dots + 17y - 1)(y^{59} - 24y^{58} + \dots + 7920y - 361)$